

RAW SEQUENCE LISTING

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Application Serial Number: 161768,9S1
Source: IFUWO
Date Processed by STIC: 3-18-05

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/768,951

DATE: 03/18/2005
TIME: 10:39:32

Input Set : A:\SEQLIST.txt
Output Set: N:\CRF4\03182005\J768951.raw

3 <110> APPLICANT: COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
 5 <120> TITLE OF INVENTION: STABLE GENE VARIANTS OF LIPASES
 7 <130> FILE REFERENCE: 71914
 9 <140> CURRENT APPLICATION NUMBER: US 10/768,951
 10 <141> CURRENT FILING DATE: 2004-01-29
 12 <160> NUMBER OF SEQ ID NOS: 12
 14 <170> SOFTWARE: PatentIn version 3.1
 16 <210> SEQ ID NO: 1
 17 <211> LENGTH: 181
 18 <212> TYPE: PRT
 19 <213> ORGANISM: Bacillus subtilis
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 23 <222> LOCATION: (1)...(181)
 24 <223> OTHER INFORMATION: enzyme sequence
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 33 Ser Phe Asn Phe Ala Gly Ile Lys Ser Tyr Leu Val Ser Gln Gly Trp
 34 20 25 30
 37 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr
 38 35 40 45
 41 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
 42 50 55 60
 45 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly
 46 65 70 75 80
 49 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys
 50 85 90 95
 53 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
 54 100 105 110
 57 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
 58 115 120 125
 61 Ile Tyr Ser Ser Ala Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
 62 130 135 140
 65 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
 66 145 150 155 160
 69 Tyr Ser Ser Gln Val Asn Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly
 70 165 170 175
 73 Gly Gln Asn Thr Asn
 74 180
 77 <210> SEQ ID NO: 2
 78 <211> LENGTH: 181
 79 <212> TYPE: PRT

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80 <213> ORGANISM: Bacillus subtilis
 82 <220> FEATURE:
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 84 <222> LOCATION: (1)..(181)
 85 <223> OTHER INFORMATION: Protein sequence
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 95 20 25 30
 98 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr
 99 35 40 45
 102 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
 103 50 55 60
 106 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly
 107 65 70 75 80
 110 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys
 111 85 90 95
 114 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
 115 100 105 110
 118 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
 119 115 120 125
 122 Ile Tyr Ser Ser Ala Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
 123 130 135 140
 126 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
 127 145 150 155 160
 130 Tyr Ser Ser Gln Val Tyr Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly
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 134 Gly Gln Asn Thr Asn
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 145 <222> LOCATION: (1)..(181)
 146 <223> OTHER INFORMATION: Protein sequence
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 156 20 25 30
 159 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr
 160 35 40 45
 163 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
 164 50 55 60
 167 Asp Glu Thr Gly Val Lys Lys Val Asp Ile Val Ala His Ser Met Gly
 168 65 70 75 80

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171 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys
 172 85 90 95
 175 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
 176 100 105 110
 179 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
 180 115 120 125
 183 Ile Tyr Ser Ser Asp Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
 184 130 135 140
 187 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
 188 145 150 155 160
 191 Tyr Ser Ser Gln Val Tyr Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly
 192 165 170 175
 195 Gly Gln Asn Thr Asn
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 206 <222> LOCATION: (1)..(181)
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 216 Ser Phe Asn Phe Ala Gly Ile Lys Ser Tyr Leu Val Ser Gln Gly Trp
 217 20 25 30
 220 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr
 221 35 40 45
 224 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
 225 50 55 60
 228 Asp Glu Thr Gly Thr Lys Lys Val Asp Ile Val Ala His Ser Met Gly
 229 65 70 75 80
 232 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys
 233 85 90 95
 236 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
 237 100 105 110
 240 Lys Ala Pro Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
 241 115 120 125
 244 Ile Tyr Ser Ser Ala Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
 245 130 135 140
 248 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
 249 145 150 155 160
 252 Tyr Ser Ser Gln Val Tyr Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly
 253 165 170 175
 256 Gly Gln Asn Thr Asn
 257 180
 260 <210> SEQ ID NO: 5
 261 <211> LENGTH: 181

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Input Set : A:\SEQLIST.txt
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262 <212> TYPE: PRT
 263 <213> ORGANISM: Bacillus subtilis
 265 <220> FEATURE:
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 267 <222> LOCATION: (1)..(181)
 268 <223> OTHER INFORMATION: Protein Sequence
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 278 20 25 30
 281 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr
 282 35 40 45
 285 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
 286 50 55 60
 289 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly
 290 65 70 75 80
 293 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys
 294 85 90 95
 297 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
 298 100 105 110
 301 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
 302 115 120 125
 305 Ile Tyr Ser Ser Asp Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
 306 130 135 140
 309 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
 310 145 150 155 160
 313 Tyr Ser Ser Gln Val Tyr Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly
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 317 Gly Gln Asn Thr Asn
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 326 <220> FEATURE:
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 328 <222> LOCATION: (1)..(181)
 329 <223> OTHER INFORMATION: Protein sequence
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 338 Ser Phe Asn Phe Ala Gly Ile Lys Ser Tyr Leu Val Ser Gln Gly Trp
 339 20 25 30
 342 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr
 343 35 40 45
 346 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
 347 50 55 60
 350 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly

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351 65          70          75          80
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358 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
359           100          105          110
362 Lys Ala Pro Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
363           115          120          125
366 Ile Tyr Ser Ser Asp Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
367           130          135          140
370 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
371 145           150           155           160
374 Tyr Ser Ser Gln Val Tyr Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly
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387 <220> FEATURE:
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389 <222> LOCATION: (1)..(181)
390 <223> OTHER INFORMATION: Protein sequence
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400           20           25           30
403 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr
404           35           40           45
407 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
408           50           55           60
411 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly
412 65           70           75           80
415 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys
416           85           90           95
419 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
420           100          105          110
423 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
424           115          120          125
427 Ile Tyr Ser Ser Ala Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
428           130          135          140
431 Asp Gly Ala Ser Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
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435 Tyr Ser Ser Gln Val Tyr Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly
436           165           170           175
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440           180
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VERIFICATION SUMMARY DATE: 03/18/2005
PATENT APPLICATION: US/10/768,951 TIME: 10:39:33

Input Set : A:\SEQLIST.txt
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